

# ABSTRACT

A knockout mouse which is unresponsive to peptidoglycan, a lipoprotein/lipopeptide and the like, and is useful for elucidating the contribution of individual members of the TLR family to a signaling stimulated with bacterial cell components in vivo, in particular, the role of TLR2 and MyD88 in vivo. A bacterial cell component-unresponsive knockout mouse is generated by a process comprising the steps of: a targeting vector is constructed by replacing a whole or a part of a gene fragment of an exon region containing a cytoplasmic region of TLR2 or MyD88 gene and the like with a plasmid having a poly A signal and a marker gene; the targeting vector is introduced into an embryonic stem cell; the targeting embryonic stem cell having a homologously recombined TLR2 or MyD88 gene is microinjected into the blastocyst of a mouse and the blastocyst is put back into the uterus of a recipient mouse.